UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 12, 2005

Keith Forman
BRAC Environmental Coordinator for
Hunters Point Shipyard
1230 Columbia Street, Suite 1100
San Diego CA 92101-8571

RE: Draft Project Work Plan PCB Hot Spot Soil Excavation Site, Parcels E and E-2, Hunters Point Shipyard, San Francisco, California, February 2005

Dear Keith:

Thank you for the opportunity to review the Draft "*Project Work Plan PCB Hot Spot Soil Excavation Site, Parcels E and E-2, Hunters Point Shipyard, San Francisco, California,*" dated February 2005.

Our comments are attached.

Please feel free to contact me at 415-972-3024 if you have any questions.

Sincerely,

Michael W. R

Michael Work
Remedial Project Manager
Superfund Division (SFD-8-3)

cc: (see Distribution List)

Attachment

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EPA Comments on the
Draft Project Work Plan
PCB Hot Spot Soil Excavation Site, Parcels E and E-2,
Hunters Point Shipyard, San Francisco, California, February 2005

GENERAL COMMENTS

1. The Draft Project Work Plan, PCB Hot Spot Soil Excavation Site, Parcels E and E-2 (the Work Plan) states that the 100 parts per million (ppm) removal action objective (RAO) level for polychlorinated biphenyls (PCBs) from the 3 to 10 foot plus depths and the 3,500 milligrams per kilogram (mg/kg) RAO for total petroleum hydrocarbons (TPH) were "established based upon agreement with the DON and EPA," but no information was provided to document these agreements. Further, EPA does not usually make agreements concerning TPH cleanup levels because of the CERCLA exclusion. It is possible that the agreement concerning the TPH cleanup was made with the Regional Water Quality Control Board (RWQCB). In addition, the RAO set for PCB (100 ppm) is twice the general action level (50 ppm) which invokes the toxic substance control act (TSCA). At this time, the rationale for selection of 100 ppm is unclear. PCBs can be mobilized by free product; if this occurs and the product surfaces (free product with the consistency of tar or asphalt has surfaced at Alameda and at Oakland Army Base), the clean backfill could be recontaminated. Also, the presence of free product can result in co-dissolution and subsequent transport of PCBs with groundwater into San Francisco Bay. Please revise the Work Plan to provide additional detail regarding the derivation of the 100 ppm PCB goal and detail regarding when/with whom any agreement was negotiated. At a minimum, this additional detail is necessary to provide a complete and accurate representation of proposed activities for the Administrative Record. Please provide additional detail or reference the specific agreement concerning the 3,500 ppm TPH goal. Finally, please work with both the EPA and the RWQCB to derive a more acceptable action level. In addition, please note that changes to the proposed RAOs in the Work Plan should also be reflected in the Sampling and Analysis Plan (SAP) in Appendix A.

2. The Work Plan discusses radiological sample type, location, and analysis in Sections 4, 5, and Appendix A, but because the information pertaining to the number and location of samples is spread throughout the document, it is difficult to understand the specific sample type, sample media, and location of sample collection as part of pre, during, and post excavation activities. Please revise the Work Plan to include a single table that provides this information, and to include maps showing the location/grid of the proposed pre-excavation scan and other samples that may be collected at that time.

SPECIFIC COMMENTS

1. **Section 2.1, Site Description and History, Page 2-2:** The Work Plan indicates that cesium 137 (^{137}Cs), strontium 90 (^{90}Sr), and radium 226 (^{226}Ra) are the radionuclides of interest, but other Hunter's Point documents (i.e. the Draft Removal Action Design and Implementation Work Plan for the Metal Debris Reef and Metal Slag Area) state that both plutonium and uranium may also be present. Please revise the Work Plan to include these radionuclides, or to specify why these nuclides are not expected. Also, the Work Plan indicates that a sheet pile wall/groundwater extraction system is currently in place in the PCB area, but does not include or reference any information that explains the need for this system. Please revise Section 2.1 to include the purpose of this system.

2. **Section 2.3.1, Chemical Characterization, Page 2-3:** Although the text states that 90 borings were completed in the PCB hotspot area it does not appear that Figure 2-1 includes all 90 borings. The text implies that all 90 borings were completed during the standard data gaps investigation (SDGI), but some of the locations on Figure 2-1 were associated with the remedial investigation (RI) (e.g., some samples appear to be from test pits and monitoring wells). Please revise the text to clarify that some samples were collected during the RI and include all 90 locations on Figure 2-1.

3. **Section 2.3.2, Radiological Characterization, Page 2-4:** The Work Plan states that "previous radiological investigations have identified radioactive materials in Parcel E and E-2. Examples of radioactive materials expected ... are ...^{226} Ra or ^{90}Sr ... (and)^{137}Cs..". As indicated in the comment on Section 2.1, it is unclear whether these examples present a complete picture of the radionuclides that might be present. Further, the report does not include a summary of the nature and location of these previous radiological investigations, which would be helpful when evaluating the appropriateness of the proposed sampling and analysis location and protocols. Please revise the Work Plan to include a more detailed discussion of the past radiological characterization information, focusing on those data and activities specific to the PCB area.

4. **Section 3.2, Removal Action Objectives, Page 3-1:** The text states that "remaining non-radioactive or non-PCB contamination at the site will be addressed through the IRP process, consistent with CERCLA and the NCP, but PCB contamination will still be present at depth if the 100 ppm RAO is used and along the shoreline. Please revise the text to specify that the remaining PCB contamination also will be addressed during the IRP process.

5. **Section 4.6, Radiological Remedial Objectives, Page 4-4:** The Work Plan references Table 3-2 for Radiological Remedial Objectives (RRO). Values presented on this table are consistent with those being utilized at other areas of Hunter's Point, but the table does not include a footnote or indicator regarding development of RROs for waters that will be

generated during dewatering or equipment decontamination (Section 5.13.2, for example, indicates that such waters may be generated). Please revise this table to include RROs for water and discuss the implementation of processes to screen and dispose of radiologically contaminated water in the text.

6. **Section 4.7.1, Investigation Levels for Gamma Radiation Surveys, Page 4-4**: The Work Plan indicates that investigations levels will "normally" be established at the reference area mean plus 3 standard deviations (σ) for gamma surveys and alpha/beta scans, but does not cite the Base-wide Plan Radiological Work Plan (BWRWP) as the source of this level. Please reference the BWRWP as the source of this level. Also, please specify what would constitute an abnormal situation where the 3σ value would not be used.

7. **Section 4.8, Radiation Detection Instrumentation, Page 4-4**: Table 4-2 presents the instrumentation that may be used for radiological surveys at this site, which agrees with suggested instrumentation in MARSSIM, Appendix H, but the language of the section implies that other instrumentation could be used. Please provide the circumstances under which the instrumentation in Table 4-2 would not be used. Also, the table includes "typical background" values, but does not reference or discuss how these values were obtained. Please revise the discussion in Section 4.8 to reference and discuss the origin of these typical background values.

8. **Section 4.8.1, Calibration, Page 4-5:** The Work Plan states that portable survey equipment calibration will be completed on an annual frequency; MARSSIM suggests that calibration should be performed, at a minimum, annually. However, MARSSIM also provides guidance as to when more frequent calibration might be required. Please revise the Work Plan to indicate the conditions under which a more frequent calibration check might be required.

9. **Section 4.9.6, MDC for Gamma Scans for Surface Areas (2-inch by 2-inch NaI Probe), Pages 4-12 to 4-14:** The Work Plan indicates that the number of background counts in a scan interval time is 98.07 counts per second (5,884counts per minute / 60 seconds per minute) and indicates that this value was taken from non-impacted area in Parcel E, but it is not clear whether other non-impacted area values are available and whether the other values would be more relevant or appropriate. Please provide additional discussion to explain why this value was selected for use. Additionally, several input parameters for both Microshield™ and equation 7-11 are presented in the Work Plan; the origin of these values must be referenced. Alternatively, if this was an example presented to clarify the use of the MARSSIM based equations, please state this.

10. **Section 4.10, Laboratory Analysis, Page 4-16**: Section 4.10 presents on-site laboratory equipment, but does not indicate the number or location of swipe samples that will be analyzed by the onsite lab, nor whether additional media will be analyzed. Please revise

the Work Plan to address, in this section, the specific nature (media) and number of samples to be analyzed by on-site laboratory equipment, as this is required to understand whether the proposed instrumentation is correct for the media to be analyzed.

11. **Section 4.11.1 Reference (Background) Areas, Page 4-17**: The Work Plan states that a designated background area will be established, but the criteria for determining the background location were not included. It would appear that the background area can be selected prior to implementation of the Work Plan, so it is unclear why more detail regarding the background media type, sample location, sample number, etc. were not specifically addressed. Please revise the Work Plan to include this information, or to specify why more detail cannot be provided at this time.

12. **Section 5.8, Identification and Removal of Radioactive Material, Pages 5-4 to 5-15**: The proposed method to identify radioactively contaminated soil is via scan for gamma sources, but this approach may not be sufficient to identify areas contaminated with ^{90}Sr alone, and also may not be sufficient if further investigation indicates the presence of alpha emitters (i.e. plutonium). Please revise the approach to ensure that the scan process does not potentially overlook areas of radioactive contamination that might not be detected through the scan, or to indicate why the proposed approach will be sufficiently protective. Also, previous portions of the Work Plan imply that if additional radionuclides are detected beyond the Radionuclides of Concern (ROCs) (^{137}Cs, ^{90}Sr, and ^{226}Ra), appropriate detection and removal shall be performed. Please clarify the methods that will be used to detect specific radionuclides outside of the identified ROCs (i.e. presumably the gamma scans and gross alpha, etc), and what steps will be taken to ensure that appropriate methodologies are used to detect these constituent in media of concern.

13. **Section 5.8, Identification and Removal of Radioactive Material, Page 5-5**: The text in this section briefly describes the process of managing and packaging excavation materials identified as having elevated radioactivity levels, which is in accordance with Department of Transportation (DOT) regulations; however the text of the third paragraph on page 5-15 (Section 5.13.5 Soil Stockpiles) appears to suggest a different process of management of radioactive and mixed waste (e.g., that it will be staged separately in stockpiles with the area clearly demarcated as a radiologically controlled area). Based on the other processes described in this section, it appears that these radiological and mixed waste soils may be generated at a later time in the excavation process, but the proposed procedures in Section 5.13.5 appear to conflict with Section 5.8. Please revise the Work Plan to clarify the varied types of materials management anticipated for all radioactive or mixed waste soils.

14. **Section 5.10, Pre-Excavation PCB Characterization Sampling, Page 5-7; Figure 5-2, PCB Hot Spot Pre-Excavation Characterization Sampling Plan**: The text of this section and the associated figure present the specific locations which are expected to be sampled prior to excavation activities at the PCB Hot Spot, but there is no discussion or

plan proposed to address the locations outside of the proposed excavation footprint which have PCB concentrations in excess of the RAO for PCBs. These areas include:

A. Approximately 150 feet ESE of the proposed excavation boundary in the vicinity of IRB02B418 (7 ppm at 2.75 feet.
B. Approximately 100 feet SSW of the proposed excavation boundary in the vicinity of IRB02SH005 (6 ppm and 2 ppm at .25 feet and 2.25 feet respectively)
C. Approximately 5 feet NNE of the proposed excavation boundary in the vicinity of IR01B387 (3 ppm at 2.08 feet)
D. Approximately 190 feet E of the proposed excavation boundary in the vicinity of IR12SS17 (7 ppm at the surface)
E. Approximately 140 feet E of the proposed excavation boundary in the vicinity of IR12SS19 (2 at the surface)
F. Multiple locations 250 feet or greater ENE of the proposed excavation boundary in the vicinity of locations IR12B041 (26 at 1.72 feet), IR01SS349 (4 at .50 feet), IR12B042 (37 at 1.77 feet), IR0TA07B (150 at 3.93 feet), IR0TA07A 75 at 4.19 feet), IR04B017 (3 at 1.75 feet), and IR04B019 (12 and 2 at 2.75 feet and 4.75 feet respectively)

Given the topography in this area, it is possible that soil could erode from some of these areas in the future and recontaminate the clean soil used to backfill the PCB Hot Spot Area. Please revise the Work Plan to discuss how and when these areas will be addressed. If there is no plan at this time to address these areas, please provide justification for this omission, or develop a plan to adequately address all areas in excess of acceptable RAOs. Also, please include these changes in the Sampling and Analysis Plan (Appendix A).

15. **Section 5.12, Existing Wells and Piezometers, Page 5-8:** The meaning of the sentence that reads, "Only wells and piezometers that are above the anticipated excavation depth will be destroyed prior to commencing excavation activities," is unclear. All wells and piezometers have casing that extends into or through the anticipated excavation depth. Please clarify whether the intent of this sentence was to specify that wells and piezometers with screened intervals above the anticipated depth would be destroyed, and whether this would also apply to wells that are partially screened within the anticipated excavation. Also, please provide a list of monitoring wells and piezometers that may be impacted by this to the Regulatory Agencies before destruction occurs. Finally, please clarify whether destroyed monitoring wells and piezometers will be replaced.

16. **Section 5.13, PCB Hot Spot Soil Excavation and Removal of Additional Radioactive Materials, Page 5-11 and Executive Summary, Page E-3:** The text specifies that large-sized debris will be surveyed for "radioactive materials that may be affixed to the surface areas of the debris," but does not specify that a similar evaluation should be done for PCBs. In the presence of free product now or in the past, PCBs may have infiltrated into

porous materials like concrete, but it does not appear that there are any provisions for sampling this debris prior to disposal. The surfaces of non-porous materials may be contaminated with PCBs, but it does not appear that these surfaces will be washed to remove PCBs or that wipe sampling will be done to confirm that debris is not contaminated with PCBs. Please clarify how potential PCB contamination of large-sized debris will be addressed.

17. **Section 5.13.2, Dewatering of Excavated Materials, Page 5-12:** Design drawings for the dewatering pad have not been provided, so it is unclear if any liquid that collects in the layer of sand between the 20 mil liners will be collected for disposal. Also, it is unclear what would be done if the upper liner is inadvertently punctured. Please either provide design drawings for the dewatering pad or discuss whether there will be provision to collect any liquid from the sand layer between the liners and discuss procedures that will be followed if the liner is inadvertently punctured.

18. **Section 5.13.3, Secondary Screening Conveyor System, Pages 5-12 to 5-13; Section 5.13.4, Secondary Screening Conveyor System Surveying, Pages 5-13 to 5-14**: The Work Plan indicates that the conveyor system will be used to perform secondary radiological screening of excavated soils, but does not indicate whether any actions would be taken if a particular lift or movement of soils detected radiation that was not found during initial scans. For example, it is assumed that all soil will travel along the conveyor system, including soil initially screened to only contain PCBs. However, if the secondary scan showed there to be radionuclides not detected initially, the Work Plan does not indicate whether any actions would be taken to backtrack the sources of the secondary detection. Please revise the Work Plan to address what actions might be taken, if any to backtrack the sources of secondary detection. Also, please revise the Work Plan to justify the collection of two composite samples per 50 foot by 50 foot lift. In addition, while the selection of Quality Control (QC) samples for offsite analysis is appropriate, please state why alpha analysis will only be performed if elevated ^{137} Cs is detected.

19. **Section 7.2.1, Waste Classification, Page 7-3 and Section 7.2.5, Wastewater and Waste Fluids, Page 7-4 and Section 7.3.4, Wastewater and Waste Fluids:** The text discusses wastewater resulting from stormwater runoff and decontamination water, but does not include the wastewater that will be generated if soils require dewatering (i.e., those dried at the dewatering pad). Please revise the text to include the handling of wastewater generated during dewatering.

20. **Appendix A, Section 4.1, Radiological Screening and Excavated Material Sampling, Page A.4-1:** Section 5.7 of the Work Plan states that areas detected during the surface survey as having radiation levels greater than 3 sigma of the mean background area level will be "evaluated further" for the presence of radioactive materials. Section 5.8 also indicates that this evaluation shall be performed, but specific details to explain how the area will be evaluated are not stated It was assumed that this detail was included in the

Sampling and Analysis Plan (Appendix A), but Section 4.1 of Appendix A does not include this information either. Please revise the Sampling and Analysis Plan or Work Plan to specify how the this further evaluation will be performed.

21. **Appendix A, Section 4.3, Post-Excavation Characterization Sampling, pages A.4-3 to A.4-4:** The sampling and analysis plan indicates that post-excavation characterization radiological samples will be collected at the same location that random PCB samples will be collected. It is assumed that these samples will be samples of media collected for laboratory analysis; please revise the Sampling and Analysis Plan to clarify this.

MINOR COMMENTS

1. **Executive Summary, Page ES-3**: The end of the second sentence on page ES-3 concludes with information that soils along the perimeter will be analyzed for polynuclear aromatic hydrocarbons. However, the first part of the next sentence indicates that polycyclic aromatic hydrocarbons will be analyzed only if TPH is confirmed in the sample. While the term "polycyclic" is often used interchangeably with "polynuclear," for clarity it is preferable that consistent terminology is used. Please revise the Work Plan accordingly.

2. **Figure 2-1, PCB Hot spot Excavation Standard Data Gaps Investigation Results and Figure 5-2, PCB Hot Spot Pre-Excavation Characterization Sampling Plan:** These figures are missing symbols for boring/sample locations. Also, it appears that some RI data is included on the figure (e.g., IR12MW11A, IR12SS17, IR01TA08B, etc.), so the title of Figure 2-1 is not representative of the information presented on the figure. Please include the missing symbols on both figures and revise the title of Figure 2-1 to be representative of the information presented on the figure.

3. **Section 8.4.2.1, Excavation Management Plan, Page 8-4**: This section discusses the procedures in place to excavate the contaminated soil and indicates what steps may occur if certain areas are to be excavated such that the excavation slope becomes a concern. The text then indicates that excavations greater than 4 feet deep will be cut with a slope factor of 1.5 horizontal feet to 1 vertical foot unless otherwise determined by a "competent person." The text then indicates that daily inspections will also be performed by a "competent person." Due to the nature of these activities, additional details are required to define the necessary education and/or skills of the individuals deemed "competent" and thus expected to make these decisions. Please revise the Work Plan to either identify the specific individuals expected to make these decisions or provide information on the minimum qualifications required for this position/person.

4. **Section 9.2 Project Responsibilities, Page 9-1 and Appendix A, Section 7.1, Points of Contact, Page A.7-1**: The list of key project and regulatory contacts in the Work Plan is

more comprehensive than that included in the Key Contact list provided in Section 7 of the SAP. In addition, all but one of the individuals on the list in Section 7 are included on the larger list in Section 9 of the Work Plan. This additional individual is "Project Chemist, Ms. Lynn Jefferson. It may make sense for the list in the SAP to be somewhat abbreviated if the individuals not included are not involved in the actual sampling in any way; however all personnel on the SAP list should be included on the contact list in the Work Plan. In addition, these omissions occur in the text of Section 7 of the SAP, while the entire list of personnel included in Section 9 of the Work Plan appear to be represented on Figure A.7-1 of the SAP. Please revise the Work Plan and SAP to provide consistent information in these two sections.

5. **Appendix A, Section 5.1, Analytical Methods, Page A.5-1**: The list of analyses included under the "Off-site laboratory (Soil Samples)" and "Off-site laboratory (Wastewater Samples)" appear to include analytes/methods that were not proposed or included in the Work Plan. These include volatile organic compounds (VOCs) and asbestos for the soil samples and VOCs for the Wastewater Samples. Please clarify whether these analyses may actually be performed or revise the SAP accordingly.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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May 9, 2005

Keith Forman
BRAC Environmental Coordinator for
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1230 Columbia Street, Suite 1100
San Diego CA 92101-8571

RE: Additional EPA Comments on the Draft Project Work Plan PCB Hot Spot Soil Excavation Site Removal Action, Parcels E and E-2, Hunters Point Shipyard, San Francisco, California, February 2005

Dear Keith:

Please find attached additional comments on the Draft *"Project Work Plan PCB Hot Spot Soil Excavation Site Removal Action, Parcels E and E-2, Hunters Point Shipyard, San Francisco, California,"* dated February 2005. These comments are the result of our review of the *"Parcels E and E-2 Standard Data Gaps Investigation Data Summary Report (Revision 01),"* which led us to conclude that metals are also a concern in the PCB Hot Spot Excavation Area. These same comments were transmitted to you via email on May 6, 2005.

Please feel free to contact me at 415-972-3024 if you have any questions.

Sincerely,

Michael Work

Michael Work
Remedial Project Manager
Superfund Division (SFD-8-3)

cc: (see Distribution List)

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Distribution List HPS

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Additional EPA Comments on the
PCB Hot Spot Soil Excavation Site Removal Action,
Hunters Point Shipyard, San Francisco, California

1. During our review of the Parcels E and E-2 Standard Data Gaps Investigation Data Summary Report (Revision 01), it became apparent that there are elevated concentrations of copper, lead, mercury, and zinc in many of the samples that were collected in the Polychlorinated Biphenyl (PCB) Hot Spot Removal area, so it appears that metals are also contaminants of concern in this area. In addition, some samples had elevated levels of 4,4'-DDT. The presence of metals and 4,4'-DDT was not discussed in the Draft Project Work Plan (Revision 0) PCB Hot Spot Soil Excavation Site, Parcels E and E-2, Hunters Point Shipyard, so it is not clear whether confirmation sampling will include these analytes. Please discuss whether confirmation sampling will include these contaminants. Also please confirm that waste characterization samples will be analyzed for these constituents.

2. This removal action will address PCBs in soil in the PCB Hot Spot Excavation Area, but may not address all the metals and 4,4'-DDT contamination in surface soil in adjacent onshore and shoreline areas or subsurface metals and 4,4'-DDT contamination, so it is possible that metals and 4;4'-DDT may continue to be transported into Parcel F. The presence of elevated concentrations of similar metals in surface soil, subsurface soil, shoreline samples and in Parcel F sediments suggests that there are mechanisms for transporting these contaminants into San Francisco Bay. These mechanisms may include erosion and overland transport or dissolved phase transport in groundwater. The sheet-pile wall and associated extraction system may minimize dissolved phase transport to Parcel F. Please clarify whether the sheet-pile wall will be maintained and whether the extraction system will be restarted after the removal action is complete.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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May 31, 2005

Keith Forman
BRAC Environmental Coordinator for
Hunters Point Shipyard
1230 Columbia Street, Suite 1100
San Diego CA 92101-8571

RE: Responses to U.S. EPA Comments on the Draft Project Work Plan, Revision 0, for the PCB Hot Spot Soil Excavation Site, February 2005; and the Draft Final Project Work Plan, Revision 0, for the PCB Hotspot Soil Excavation Site at Parcels E and E-2, Hunters Point Shipyard, San Francisco, California, May 17, 2005

Dear Keith:

Thank you for the opportunity to review the Draft Final "*Project Work Plan, Revision 0, for the PCB Hotspot Soil Excavation Site at Parcels E and E-2, Hunters Point Shipyard, San Francisco, California,*" dated May 17, 2005. Our comments are attached.

We thank the Navy for addressing most of EPA's previous comments. Please note that we have some additional comments that are the result of new text included in this document. Also note that we have at least one major remaining concern regarding the concentration of PCBs proposed to be left in place and compliance with the regulation cited by the Navy (40 CFR 761.61). Please see our review of the response to general comment number 1.

Please feel free to contact me at 415-972-3024 if you have any questions.

Sincerely,

Michael Work

Michael Work
Remedial Project Manager
Superfund Division (SFD-8-3)

cc: (see Distribution List)

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EPA Comments on the
Responses to U.S. EPA Comments on the Draft Project Work Plan, Revision 0, for the PCB Hot Spot Soil Excavation Site, February 2005; and the Draft Final Project Work Plan, Revision 0, for the PCB Hotspot Soil Excavation Site at Parcels E and E-2, Hunters Point Shipyard, San Francisco, California, May 2005

APRIL 12, 2005 U.S. EPA COMMENTS

1. **Response to General Comment 1**: The response to this comment does not fully address the issues raised in the comment. While 40 CFR 761.61 (PCB Remediation Wastes) does include an option for polychlorinated biphenyl (PCB) wastes with concentrations greater than 25 and less than or equal to 100 parts per million (ppm) to remain in place, it also stipulates that a "cap" meeting the requirements of Section (a)(7) and (a)(8) is required. Section (a) (7) requires a cap "to prevent or minimize human exposure, infiltration of water, and erosion;" concrete or asphalt caps with a minimum thickness of 6 inches are recommended. Section (a) (7) also specifies that compacted soil caps must have a minimum thickness of 10 inches and must comply with the permeability, sieve, liquid limit, and plasticity index parameters in 762.75(b)(1)(ii) through (b)(1)(v). Section (a) (8) requires deed restrictions for caps, in perpetuity. It is unlikely that the soil that will be used as backfill will meet the requirements of 762.75(b)(1)(ii) through (b)(1)(v). In addition, these criteria are for "low occupancy" areas while the allowable criteria for "high occupancy" areas is markedly different. Please provide additional detail and justification to explain how proposed action will comply with all of the requirements of 40 CFR 761. Please also test the backfill soil for permeability, sieve, liquid limit, and plasticity index.

   Further, since the final action must be protective of human health and the environment, the site is adjacent to San Francisco Bay, and infiltrating groundwater will likely result in PCBs in groundwater that are transported to the Bay, it is likely that leaving PCBs in place at concentrations of 100 ppm will not be protective of surface water quality, sediment quality, and aquatic life. As requested in the original comment, we recommend that the Navy work with EPA and the RWQCB to develop an acceptable action level; if this will be done during the feasibility study (FS), please state this.

   Since this area receives surface water run-off from portions of the landfill cap and from areas east of the landfill, to minimize infiltration, it is important that water does not pond on this area. At present, there is evidence that run-off water frequently ponds in this area. It is recommended that the site be graded to minimize the potential for ponded water, and hence the potential for infiltration. Please discuss final grading plans and specify whether an effort will be made to minimize the potential for ponding and infiltration.

2. **Response to Specific Comment 12:** The response to this comment does not address how potential soil containing alpha emitters like plutonium and uranium will be isolated, since laboratory testing will be done after soil is already stockpiled. Please specify procedures to minimize the amount of soil that will require special handling if alpha emitters are found.

3. **Response to Specific Comment 14:** The response to this comment does not address the issue of recontaminating backfill soil from erosion, runoff, and redeposition of soil eroded from contaminated areas upslope of this area. It is understood that this action may not be able to address all of the contamination in adjacent areas, however, the text or response should discuss when and how these areas may be addressed and specify how the potential for recontamination will be minimized.

4. **Response to Specific Comment 16:** The response partially addresses the comment. The decision to sample large debris for PCBs should field conditions warrant is noted the response. However, it is unclear how the available historical data will be used to support this decision. For example, the radius for which PCB data is considered applicable is unclear. Similarly, the concentrations that would trigger the need to sample large debris are not specified. Finally, it is unclear if the presence of free petroleum product would trigger the need to sample this debris. Please clarify the radius for which PCB data is applicable, the concentrations that would trigger the need to sample large debris, and whether the presence of free product would also trigger the need to sample this debris for the benefit of the personnel in the field required to make decisions based on "professional judgement."

APRIL 27, 2005 U.S. EPA COMMENTS

1. **Response to Specific Comment 1:** The response to this comment does not address protection of receptors in San Francisco Bay. Since precipitation and surface water run-off can still infiltrate into soil that will be left in place, it is likely that the Chemical Cleanup Goal of 100 ppm for PCBs in soils left in place will not be protective of surface water, sediment or aquatic receptors. In addition, since the text in Section 5.13 indicates that "absorbent booms and/or pads will be used to collect the majority of the free-phase product to the extent practical," it is possible that some free-phase product will remain to facilitate transport of PCBs to San Francisco Bay. If the soil with PCB contamination of 100 ppm is left in place, groundwater monitoring between the PCB hot spot removal area and San Francisco Bay and evaluation of whether this interim measure is protective of surface water, sediment, and aquatic life will be necessary for the Remedial Investigation and Feasibility Study Reports.

3. **Response to Specific Comment 3:** Please see the comment on the Response to Specific Comment 16, above.

ADDITIONAL COMMENTS

1. **Section 2.1, Chemical Characterization, Page 2-4:** The proposed screening level of 10,000 milligrams per kilogram (mg/kg) for copper, lead, mercury, and zinc may not be protective of surface water, sediment, and aquatic receptors. After completion of this action, groundwater monitoring between the site and San Francisco Bay should be done to evaluate whether dissolved metals are transported into San Francisco Bay. This should be evaluated and discussed during the Remedial Investigation/Feasibility Study process.

2. **Section 5.8, Identification and Removal of Radioactive Materials, Page 5-5:** The text states that a " sandblast grit encountered during excavation activities will be handled in accordance with a RASO-approved work instruction specifically written to govern this material," but this work instruction is not included in this work plan or in the Base-Wide Radiological Work Plan. It is unclear whether this work instruction includes information for recognizing all types of sandblast grit or if it just pertains to "Black Beauty" sandblast grit. Please provide the Regulatory Agencies with a copy of this work instruction or provide specific instructions for recognizing all types of sandblast grit in this Work Plan.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

December 5, 2005

Keith Forman
Environmental Coordinator for
Hunters Point Shipyard
Department of the Navy
Base Realignment and Closure
Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

RE: Final Project Work Plan, PCB Hot Spot Excavation Site For Parcels E and E-2, Hunters Point Shipyard, San Francisco, California, November 2005

Dear Keith:

Thank you for the opportunity to review the Final *"Project Work Plan, PCB Hot Spot Excavation Site For Parcels E and E-2, Hunters Point Shipyard, San Francisco, California,"* dated November 2005. Our comments are attached.

We noted that significant changes have been made to the proposed excavation boundary; these changes are not discussed in the text of the document. The current excavation is approximately 360 feet shorter; the northern portion has been truncated. In addition, the western boundary has been moved from the base of the slope near the shoreline to the base of the slope on the inland edge of the ridge; this change appears to move the excavation boundary 40 to 60 feet inland in the southern portion of the excavation and 10 to 30 feet inland in the northern portion of the excavation. Based on past information this would mean that significant polychlorinated biphenyl (PCB) contamination will be left in place, particularly in the southwestern area, where the maximum detected concentration is 220 milligrams/kilogram (mg/kg). Since these areas are close to the shoreline, it is possible that the impact from on-shore PCB contamination to Parcel F will not be fully addressed in this removal action.

Additionally, the Sampling and Analysis Plan (SAP) in Appendix A was revised to include some sampling unrelated to this removal action. Specifically, waste consolidation of material that potentially contains or is contaminated with PCBs in Building 115 in Parcel B is now included in the SAP. Numerous sections of the document now include additional text to reflect this change. We also noted that the Data Quality Objectives (Table A8-1) were not updated to reflect this additional work.

Please feel free to contact me at 415-972-3024 if you have any questions.

Sincerely,

Michael Work
Remedial Project Manager
Superfund Division (SFD-8-3)

cc: (see Distribution List)

Attachment

Distribution List HPS

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EPA Comments on the
Final Project Work Plan, PCB Hot Spot Excavation Site
For Parcels E and E-2, Hunters Point Shipyard,
San Francisco, California, November 2005

Responses to Comments

1. **Response to April 27, 2005 EPA Comments, Response to Specific Comment 1:** This comment-response chain is about the protectiveness of the Chemical Cleanup Goal of 100 parts per million (ppm) for polychlorinated biphenyls (PCBs) in soils left in place. The latest response indicates that the Shoreline Technical Memorandum (SulTech, 2005) concludes that PCBs are highly immobile in soil and groundwater under normal pH and eH conditions, but the response does not acknowledge that groundwater beneath the PCB Hot Spot Area has free-phase petroleum product that would facilitate transport PCBs. PCBs would tend to partition from soil into the free phase hydrocarbon. Further, the removal action will not address soil beneath the embankment adjacent to the shoreline, so petroleum hydrocarbons may still be present to facilitate PCB transport in groundwater after the time-critical removal action (TCRA) is complete. These free-phase petroleum hydrocarbons are in the tidally influenced zone and could be transported into the excavated area, so the 100 ppm Chemical Cleanup Goal may not be protective of San Francisco Bay.

New General Comments

1. The proposed post-excavation sampling at the PCB Hot Spot Area does not appear to take the drums and containers into account. Based on discussions at Base Realignment and Closure (BRAC) Cleanup Team (BCT) meetings and during the time-critical removal action (TCRA) conference calls, volatile organic compounds (VOCs) have been detected in at least one of the drums and SVOCs may also be present in some of the drums or containers, but the post-excavation sampling does not include VOCs or SVOCs. Since at least one drum was punctured during excavation and some of the contents were released, it is possible that soil was contaminated by this drum or by other leaking drums and containers. Post-excavation sampling in areas where drums and containers were found should include all of the constituents identified in the drums and containers. This will provide information to evaluate the residual risk and to evaluate the potential that residual contamination could be transported in groundwater into San Francisco Bay after the excavations are complete. Therefore, VOCs and/or SVOCs should be added to the analyte list in the drum/container areas if any of the drums or containers contained VOCs and/or SVOCs.

2. Most of the responses address EPA comments on the PCB Hot Spot Excavation Site for

Parcels E and E-2, Hunters Point Shipyard, but the responses do not indicate whether a change was made to the text. It appears that the text was not changed in response to any of EPA's comments.

3. Some of the insert pages (e.g., pages 1-4 and 8-6) were issued as single-sided pages, which does not allow a replacement to be made in the document because the material on the reverse side of the original page must be preserved. For double-sided documents, please issue double-sided replacement pages.

Errata

1. The scale bar on Figure 2-1 indicates that the scale is 60 feet per inch, but the text beneath the scale bar indicates that the scale is 40 feet per inch. Please resolve this discrepancy.

2. Figure A.3-1 was not replaced; this figure still shows the old excavation boundary. Please provide a replacement for this figure.

3. The Replacement Pages instruction page indicates that the entire "Response to EPA Comments" section should be replaced, but the pages provided only include the most recent comments and responses. If these instructions were followed, recipients would have removed all of EPA's previous comments, when they should have inserted these additional pages. It is recommended that a replacement for the entire set of responses and comments be sent to recipients to correct this problem.